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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/815,261	03/22/2001	Yihua Chang	11302-1160 (44040-256044)	6495

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EXAMINER

ZALUKAEVA, TATYANA

ART UNIT	PAPER NUMBER
1713	9

DATE MAILED: 02/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/815,261	CHANG ET AL.
	Examiner Tatyana Zalukaeva, PhD	Art Unit 1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 08 January 2003.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-41 is/are pending in the application.

4a) Of the above claim(s) 10, 12, 14 and 16-41 is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-9, 11, 13 and 15 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) 1-41 are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. _____.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____

2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,5. 6) Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election of claims 1-9, 11, 13 and 15 in Paper No. 8 is acknowledged. The Applicant have not pointed out wherein either (1) the reasons advanced by the Examiner to establish distinctiveness between the inventions as claimed and grouped or (2) the evidence of separate status, classification and/or search are in error. Nor did Applicants indicate whether the election was made with or without traverse, therefore the election has been further treated as being made without traverse.

Therefore the restriction requirement is made **FINAL**

Information Disclosure Statement

2. With regard to the IDS filed by Applicant that contains **480 !!!** references, Applicant is advised that the M.P.E.P. states the following with respect to large information disclosure statements:

Although a concise explanation of the relevance of information is not required for English language information, applicants are encouraged to provide a concise explanation of why the English-language information is being submitted. Concise explanations (especially those that point out the relevant pages and lines) are helpful to the Office, particularly where documents are lengthy and complex and applicant is aware of a section that is highly relevant to patentability or where a large number of documents are submitted and applicant is aware that one or more is highly relevant to patentability.

M.P.E.P. § 609. This statement is in accord with dicta from *Molins PLC v. Textron, Inc.*, 48 F.3d 1172 (Fed. Cir. 1995), states that forcing **the Examiner to find "a**

needle in a haystack" is "probative of bad faith." *Id.* at 1888. This case presented a situation where the disclosure was in excess of 700 pages and contained more than fifty references. *Id.* 1888. A cursory glance at the M.P.E.P. also provides more support for this position. In a subsection entitled "Aids to Compliance With Duty of Disclosure," item thirteen states:

It is desirable to avoid the submission of long lists of documents if it can be avoided. Eliminate clearly irrelevant information and marginally pertinent cumulative information. If a long list is submitted, highlight those documents which have been specifically brought to Applicant's attention and/or are known to be of the most significance. See *Penn Yan Boats, Inc. v. Sea Lark Boats, Inc.*, 359 F.Supp 948 (S.D. Fla. 1972) aff'd 479 F.2d 1338 .

MPEP 2004. Therefore it is recommended that if any information that has been cited by Applicants in the previous disclosure statement, is known to be material for patentability as defined by 37 CFR 1.56, Applicant should present a concise statement as to the relevance of that/those particular documents therein cited. In the instant case only 35 out of 480 references are cited in the body of Specification and their relevance is discussed

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Arudi et al (U.S. 5,597,675) or by Sacripante et al (U.S. 5,645,968).

Arudi discloses a polymer made by combination of 100 g methyl methacrylate, 131.3 g butyl acrylate, 12.5 g hydroxybutyl acrylate, 3.75 g QDM-R monomer (quaternary ammonium chloride methacrylate monomer available from Nitto Chemical Industry Co. Ltd., Tokyo, Japan) depicted by formula in lines 40-45 of col. 3 in 20 g ethanol, 2.5 g azobisisobutylnitrile initiator (Vazo-64, available from DuPont Chemicals, Wilmington, Del.) and 355 g of methyl ethyl ketone was mixed well in a brown bottle with a tight screw cap (col. 9, lines 25-35)

Sacripante discloses a polymer manufactured by the following procedure 1 liter Buchi reactor equipped with a mechanical stirrer was charged with styrene (328 grams), butyl acrylate (72 grams), dodecanethiol (12 grams), carbon tetrabromide (4 grams), 3-methacryloxy-2-hydroxypropyltrimethyl ammonium chloride (16 grams), water (500 grams), ANTAROX.TM. (8.6 grams), SANIZOL b.TM. (9 grams) and ammonium persulfate (4 grams). The mixture resulting was heated to 70 degree C. under nitrogen atmosphere for a duration of 6 hours. A sample of this resin mixture was then freeze dried and evaluated with the following results: a resin number

average molecular weight of 10,088 and a resin weight average molecular weight of 75,291, as measured by gel permeation chromatography using polystyrene as the standard. (col. 9, lines 27-40, etc.)

5. Claims 1-4, 9, 11, 13, 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Jeschke et al (U.S. 6,251,849) or by Li (U.S. 6,183,844)

Jeschke discloses binder copolymer of : polymethacrylamidopropyl trimethyl ammonium chloride-co-2-ethylhexyl acrylate in a ratio of 9:1 parts by Weight (col. 6, lines 16-20)

Li discloses a copolymer prepared by admixing 470 grams of methyl methacrylate, 706 grams of n-butyl acrylate, 940 grams of styrene, and 4783 grams of the ethylenically unsaturated quaternary ammonium chloride monomer disclosed in col. 6, lines 45-65, especially lines 47-51. The synthesis is described, for example, in Table 2, col. 25.

6. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Hart et al (U.S. 5,921,912). Hart discloses copolymers comprising a cationic monomer subunit depicted by the formula in lines 20-25 of col. 3, among which preferable cationic monomers are named as 2-acryloyloxyethyltrimethyl ammonium chloride (AETAC), 2-
methacryloyloxyethyltrimethyl ammonium chloride (METAC), 3-methacrylamidopropyltrimethyl ammonium chloride (MAPTAC), diallyldimethyl ammonium chloride (DADMAC), acryloyloxyethyldimethylbenzyl ammonium chloride

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(AEDBAC), methacryloyloxyethyldimethylbenzyl ammonium chloride(MEDBAC), acrylamidopropyltrimethyl ammonium chloride (APTAC). (col. 3, lines 35-45).

The lipophilic, nonionic monomer subunit can be selected from the group:

methylacrylate, ethylacrylate, butylacrylate, 2-ethylhexylacrylate, hydroxyethylacrylate, hydroxypropylacrylate, N-isopropylacrylamide, N,N-dimethylacrylamide and vinyl methyl ether(col. 3, lines 53-56).

7. Claims 1-6, 9, 11, 13, 15 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 04309510.

JO'510 discloses a polymer prepared in , water (660g), from styrene (10g) butyl acrylate (70g) and aqueous solution containing 80 wt.% of **methacryloyloxy ethyl trimethyl ammonium chloride (25g)** at 80C. The solution is filtered to form an emulsion. 2-Hydroxy ethyl cellulose (1.5 wt. pts.) is added to the emulsion (100 wt.parts) to form a composition of backing for polyester cloth.

8. Claims 1-6, 9, 11, 13 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Carlson et al (U.S. 6,139,966).

Carlson discloses preparation of a Non-halogenated Quaternary Ammonium Vinyl Copolymers in Examples 11 and 12 , col. 24:

Styrene (161.25 g), acrylonitrile (50.0 g), hydroxypropyl acrylate (37.5 g), methacryloyloxyethyl trimethylammonium chloride (1.25 g), 3-mercaptop-1,2-propanediol (0.5 g), methylethyl ketone (375 g) and azobisisobutyronitrile (1.25 g) were charged into a liter amber reaction bottle to polymerize at predefined temperature.

Example 12

423.0 grams of methacryloyloxyethyl trimethyl ammonium chloride (QMA) was predissolved in 7.5 grams of hydroxypropyl acrylate (IIPA) in a 100 ml wide mouth jar by rolling the jar containing the two components on a rubber roller. In a one-liter amber reaction bottle were charged the above premix of QMA and IIPA, 217 g styrene (St), 72.3 g acrylonitrile (AN), 0.6 g mercaptopropane diol (MPD), 1.8 g 2,2'-azobisisobutyronitrile and 338 g methylethyl ketone (MEK). The resulting clear solution was purged with nitrogen for 5 minutes at 1 LPM (liter per minute) after that the bottle was sealed and tumbled in a constant temperature bath at 65.degree. C. for 48 hrs. The product obtained was a clear homogeneous solution with inherent viscosity of 0.31 dl/g and 950 cps Brookfield viscosity.

With regard to the triggerability of polymers it is believed that the property is inherent since the polymers are identical to those as claimed. The above rejections were made in the sense of *In re Fitzgerald* or *In re Spada*, 911 F 2d 705, 709 15 USPQ 1655, 1658 (Fed. Cir. 1990), which settles that when the claimed compositions are not

novel, they are not rendered patentable by recitation of properties, whether or not these properties are shown or suggested in prior art.

Double Patenting

9. Claims 1, 7, 8 and 9 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 6 and 13 of copending Application No. Docket No. 11302-0900. Although the conflicting claims are not identical, they are not patentably distinct from each other because they claim essentially the same polymer, wherein the transitional word comprising in claims 7 and 8 of the instant Application does not preclude the polymer of having a forth component, as per claim 8 of conflicting Application. .

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tatyana Zalukaeva, PhD whose telephone number is (703)30-8819. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (703)308-2450. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

TATYANA ZALUKAEVA
PATENT EXAMINER

February 6, 2003

Tatyana Zalukaeva, PhD
Primary Examiner
Art Unit 1713

